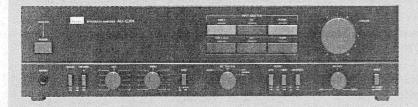
# SERVICE MANUAL

### INTEGRATED AMPLIFIER

# SANSUI AU-G30X



#### CAUTION

- Parts identified by the 
   <sup>↑</sup> symbol on the schematic diagram and the parts list are critical for safety.
   Use only replacement parts that have critical characteristics recommended by the manufacturer.
- 2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

#### •SPECIFICATIONS

Power output
Min. RMS, both channels driven, from 20 to 20,000 Hz, wit
no more than 0.05% total harmonic distortion.
45 watts per channel into 8 ohms.
Load impedance 4 to 16 ohms
Total harmonic distortion
less than 0.05% at or below
rated min. RMS power output
Intermodulation distortion
(60 Hz: 7 kHz=4:1 SMPTE method)
less than 0.05% at rated
power output
Frequency response (at 1 watt)
Overall (from AUX, CD, TUNER, TAPE PLAY-1, 2)
10 to 150,000 Hz, +0 dB
−3.0 dB
RIAA curve deviation (PHONO, 20 Hz to 20 kHz)
+ 0.2 dB,0.2 dB
Input sensitivity and impedance (at 1 kHz)
PHONO
(Max. input capability; 180 mV at 1 kHz, less tha
0.01% total harmonic distortion)
CD, AUX 150 mV/47 kohms
TUNER, TAPE PLAY-1, 2
150 mV/47 kohms
Signal to noise ratio (short-circuit, A-network)
PHONO
CD, AUX
Controls and Filter
BASS ±5 dB at 50 Hz
TREBLE ±5 dB at 10 kHz
LOUDNESS +6 dB at 50 Hz
+ 4 dB at 20 kHz
(VOLUME: -30 dB position)
FILTERS
-3 dB at 16 Hz (6 dB/oct)
HIGH —3 dB at 10 kHz (6 dB/oct)
Power requirements
Power voltage 120/220/240V (50/60 Hz)
Power consumption 260 watts Rated
400 watts Maximum
Dimensions
111 mm (4-3/8") H
329 mm (13") D
Weight
9.2 kg (20.3 lbs) packed

Design and specifications subject to changes without notice for improvements.

9.2 kg (20.3 lbs) packed

provements.Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selecitors.



#### **CAUTION**

1. The symbols, UL, CSA, SA, BS, UK, EU, AS and XX (EXPORT) on the parts list and the schematic diagram mean followings respectively.

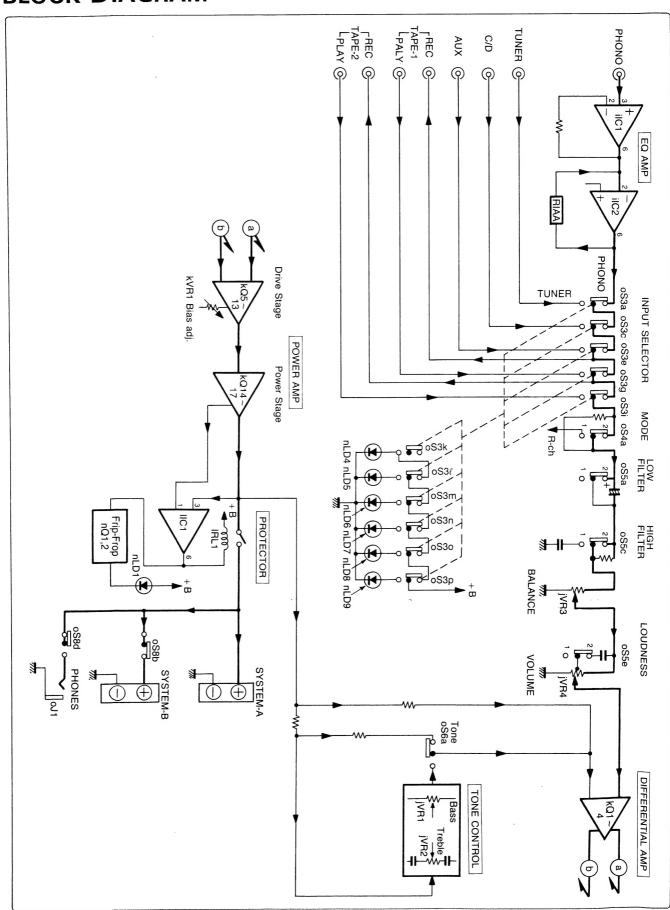
UL	Manufactured for U.S.A market.
	(Underwriters Laboratories approved model.)
CSA	Manufactured for Canadian market.
SA	Manufactured for South African market.
BS, UK	Manufactured for United Kingdom market.
EU	Manufactured for European market.
AS	Manufactured for Australian market.
XX (EXPORT)	Standard Version.
NON MARK	Common Parts.

- Some printed circuit boards are not supplied as the assembled.
   To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.
- 3. Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.
- 4. Abbreviations in this service manual are as follows.

- Abbi	reviations List	***************************************
C.R.	: Carbon Resistor	E.B.L. : Low Leak Bi-Polar
S.R.	: Solid Resistor	Electrolytic Capacitor
Ce.R.	: Cement Resistor	Ta.C.: Tantalum Capacitor
M.R.	: Metal Film Resistor	F.C. : Film Capacitor
F.R.	: Fusing Resistor	M.P. : Metalized Paper Capacitor
N.I.R.	: Non-Inflammable Resistor	P.C. : Polystyrene Capacitor
A.R.	: Array Resistor	G.C.: Gimmic Capacitor
C.C.	: Ceramic Capacitor	A.C. : Array Capacitor
C.T.	: Ceramic Capacitor,	V.R. : Variable Resistor
	Temoerature Compensation	S.V.R. : Semi Variable Resistor
E.C.	: Electrolytic Capacitor	SW. : Switch
E.L.	: Low Leak Electrolytic	Chip R.: Chip Resistor
	Capacitor	Chip C.: Chip Capacitor
E.B.	: Bi-Polar Electrolytic	
	Capacitor	

1

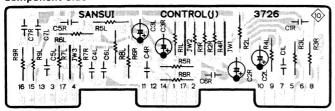
# 1. BLOCK DIAGRAM



# 2. PARTS LOCATION AND PARTS LIST

#### 2-1. F-3726 Tone Control Circuit Board

**Component Side** 

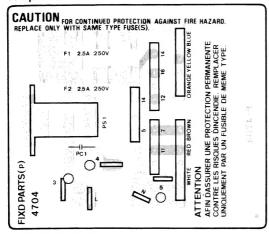


Parts List

Stock No.	Description	
46696600 46937000 46692800 46695200 46694800	0.039μF 50V F.C. 0.22μF 50V E.B. 1000pF 50V F.C. 0.01μF 50V F.C. 6800pF 50V F.C.	
	46696600 46937000 46692800 46695200	46696600 0.039μF 50V F.C. 46937000 0.22μF 50V F.C. 46692800 1000pF 50V F.C. 46695200 0.01μF 50V F.C. 46694800 6800pF 50V F.C.

#### 2-2. F-4704 POWER SW. Board

**Component Side** 

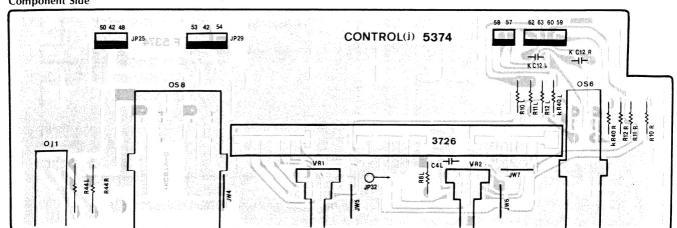


#### Parts List

Parts No.	Stock No.	Description
<b>∆</b> pC1	46425800	0.01μF 400V C.C.
<b>△</b> pF1 <b>△</b> <b>△</b> pF2	48266900 07184800 48266900	AC Fuse 2.5A 250V (XX) Fuse 1.25A 250V (EU,BS) AC Fuse 2.5A 250V (XX)
<b>∆</b> pS1	48113300	Push SW., POWER

#### 2-3. F-5374 Control & Phones Jack Board (Stock No. 00973601)

Component Side



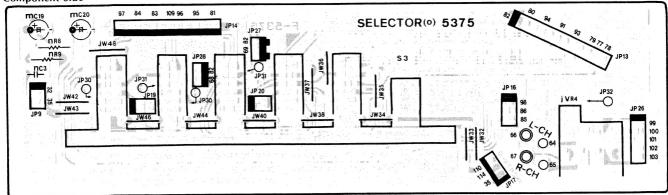
Parts List

Parts No.	Stock No.	Description	
jC4	46692800	1000pF 50V F.C.	
jVR1 jVR2	48077500 48077500	50k $\Omega$ (C) V.R., BASS 50k $\Omega$ (C) V.R., TREBLE	
<b>∆</b> kR44	46249700	220Ω 1W N.I.R.	

Parts No.	Stock No.	Description
oS6 oS8	48489500 48077200	Push SW., TONE SELECTOR Push SW., SPEAKER SELECTOR
oJ1	46579600	Jack, PHONES

# 2-4. F-5375 Input Selector & Volume Board (Stock No. 00973701)

Component Side

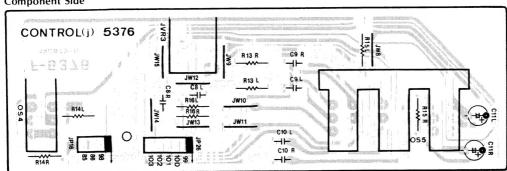


Parts List

i di to Liot		
Parts No.	Stock No.	Description
jVR4	48429800	150kΩ V.R., VOLUME
nC3	46283500	0.033µF 50V F.C.
oS3	48271300	Push SW., INPUT SELECTOR

#### 2-5. F-5376 Balance V.R. & Filter Board(Stock No. 00973801)

Component Side



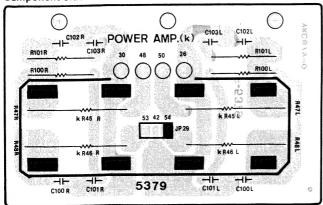
Parts List

Parts No.	Stock No.	Description
jC9 jC10	46697200 46531300	0.068μF 50V F.C. 5600pF 50V F.C.
jVR3	48077400	250K (MN) V.R., BALANCE

Parts No.	Stock No.	Description	
oS4	48077000	Push SW., MODE	
oS5	48076900	Push SW., FILTER	

# 2-6. F-5379 Speakers Terminal Board

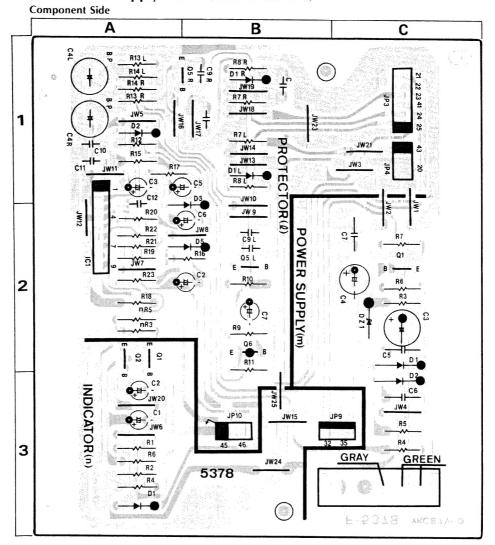
Component Side



Parts List

Parts No.	Stock No.	Description	
<b>∆</b> kR45 <b>∆</b> kR46	07229300 07229300	0.22 <b>Ω</b> 5W CE.R. 0.22 <b>Ω</b> 5W CE.R.	
oZ5	48123100	8P Terminal, SPEAKERS	

# 2-7. F-5378 Protecter & Power Supply Board (Stock No. 00974001) Component Side



Parts	List
raits	LINE

Parts No.	Stock No.	Description	Position
•Transistor IQ5 IQ6	46581701 46581601	2SC1845 2SA992	1B,2B 2B
•IC IIC1	46207600	TA7317P	2A
• Diode ID1	03117600 or 46086000	1S2473T77 1S1588TP-3	1B 1B
ID2	03117600 or 46086000	1S2473T77	1A
ID3	03117600	1S1588TP-3 1S2473T77	1A 2B
ID5	or 46086000 03117600 or 46086000	1S1588TP-3 1S2473T77 1S1588TP-3	2B 2B 2B
IC2 IC3 IC4 IC5 IC6 IC7 IC9 IC10 IC11	46310700 46295200 48145900 46302400 46302800 46302800 46283300 46282600 46282600 46282600	0.47µF 100V E.C. 47µF 16V E.C. 220µF 6.3V E.B. 1µF 50V E.C. 47µF 35V E.C. 10µF 50V F.C. 0.022µF 50V F.C. 4700pF 50V F.C. 4700pF 50V F.C. 4700pF 50V F.C.	2B 1A 1B 2B 2B 1B,2B 1A 1A
•Transistor ⚠mQ1 ⚠	03083901 or 46546701	2SD313HP 2SD880	2C 2C

Parts No.	Stock No.	Description	Position
• Diode mD1 mD2	03117700 03117700	10E-2 10E-2	2C 3C
•Zener Dio mDZ1	de 46115100 or 46115200	05Z18-Y 05Z18-Z	2C 2C
<b>∆</b> mR4	46227200	3.3Ω 1/2W N.I.R.	3C
<b>∆</b> mR5	46227200	3.3Ω 1/2W N.I.R.	3C
<b>∆</b> mR6	46229100	120Ω 1/2W N.I.R.	2C
<b>∆</b> mR7	46229800	470Ω 1/2W N.I.R.	2C
mC3	46300600	220μF 35V E.C.	2C
mC4	46302400	1μF 50V E.C.	2C
mC5	08680400	0.01μF 500V C.C.	2C
mC6	08680400	0.01μF 500V C.C.	3C
•Transistor nQ1 nQ2	46367101 or 46367301 or 46391901 46367101 or 46367301 or 46391901	2SC2603 2SC2458 2SC2785 2SC2603 2SC2458 2SC2785	2A 2A 2A 2A 2A 2A
• Diode	03117600	1S2473T77	3A
. nD1	or 46086000	1S1588TP-3	3A
nC1	46302700	4.7μF 50V E.C.	3A
nC2	46302700	4.7μF 50V E.C.	3A

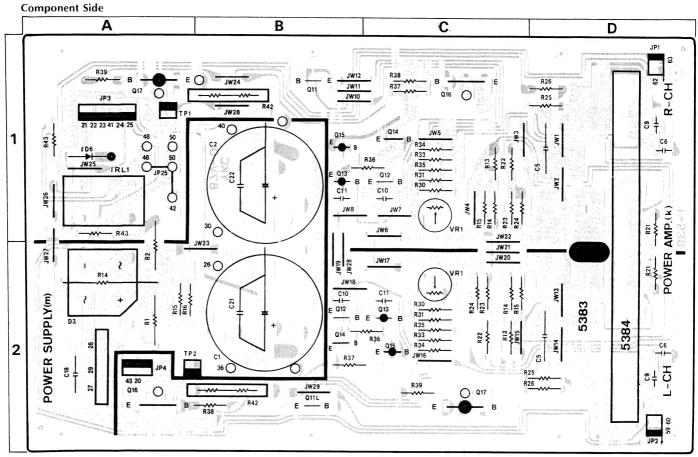
# 2-8. F-5381 EQ. Amp. & REC Selector Board (Stock No. 00974301)

Component Side 1 2 SELECTOR(0) YKC87V-0 5381 3 4 POWER SUPPLY(m) 5

Parts No.	Stock No.	Description	Position
•IC ilC1 ilC2 iC1 iC3 iC5 iC6 iC10 iC11	48507500 48507500 46696800 46694700 46693500 46693900 46695200 46695200	NE5534AN NE5534AN 0.047µF 50V F.C. 6200pF 50V F.C. 2000pF 50V F.C. 3000pF 50V F.C. 0.01µF 50V F.C. 0.01µF 50V F.C.	2 2 1 2,3 2,3 2,3 2,3 2,3 2
•Transistor ∱ mQ2 ∱ mQ3	48113001 48112901	2SC2229 2SA949	5 4
•Diode mD4 mD5 mD6 mD7	03117600 or 46086000 03117600 or 46086000 03117600 or 46086000 03117600 or 46086000	1S2473T77 1S1588TP-3 1S2473T77 1S1588TP-3 1S2473T77 1S1588TP-3 1S2473T77 1S1588TP-3	555555555
•Zener Diode mDZ2 mDZ3	46115100 or 46115200 46115100 or 46115200	05Z18-Y 05Z18-Z 05Z18-Y 05Z18-Z	5 5 5 5
∆mR12 ∆mR13	46625100 46625100	470 <b>Ω</b> 2W N.I.R. 470 <b>Ω</b> 2W N.I.R.	5 5
mC16 mC17	46222800 46222800	0.22μF,100V F.C. 0.22μF 100V F.C.	
oS2	48005100	Slide SW., REC SELECTOR	3,4
oZ1 oZ2	46438100 46546800	2P Terminal, PHONO 6P Terminal, TUNER•CD•AUX	1

# AU-G30X

#### 2-9. F-5383 Power Amp. Board (Stock No. 00974801)

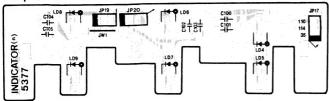


raris List	<b>Parts</b>	List
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Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
Transistor				kC5	46222800	0.22µF 100V F.C.	1D,2D
kQ11	03067401	2SC1845	1B,2B	kC16	46700900	0.01μF 50V F.C.	1C,2C
kQ12	48113001	2SC2229	2B				
kQ13	48112901	2SA949	1B	kVR1	10341900	470 $\Omega$ (B) S.V.R., bias adj	. 1C,2C
kQ14	46728901	2SC3298	2B	<ul><li>Diode</li></ul>			
kQ15	46728801	2SA1306	1B	ID6	03117700	105.3	1 ^
<b>∆</b> kQ16	48489401	2SC3284	1C,2A	100	03117700	10E-2	1A
<b>∆</b> kQ17	48489301	2SA1303	1A,2C	IRL1	48429900	Relay	1A
<b>∆</b> kR13	46231000	4.7 <b>Ω</b> 1/2W N.I.R.	1C,2C	• Diode			
<b>∆</b> kR14	46231000	4.7Ω 1/2W N.I.R.	1C,2C	mD3	46864000	RB602	2A
<b>∆</b> kR15	46231000	4.7Ω 1/2W N.I.R.	1C,2C		10001000	110002	2/ (
<b>∆</b> kR22	46231000	4.7Ω 1/2W N.I.R.	1C,2C	<b>∆</b> mR1	46251600	8.2kΩ 1W N.I.R.	2A
<b>∆</b> kR23	46231000	4.7 <b>Ω</b> 1/2W N.I.R.	1C,2C	<b>∆</b> mR2	46251600	8.2kΩ 1W N.I.R.	2A
<b>∆</b> kR24	46231000	4.7 <b>Ω</b> 1/2W N.I.R.	1C,2C				
⚠kR36	46230200	$1k\Omega$ 1/2W N.I.R.	1C,2C	mC1	48076300	8200μF 56V E.C.	2B
<b>∆</b> kR37	46229300	180Ω 1/2W N.I.R.	1C,2B	mC2	48076300	8200µF 56V E.C.	1B
<b>∆</b> kR38	46227400	4.7 <b>Ω</b> 1/2W N.I.R.	1C,2B	mC18	46078400	$0.47\mu F$ 200V F.C.	2A
<b>∆</b> kR39	46227400	4.7 <b>Ω</b> 1/2W N.I.R.	1A,2C	mC21	46222800	0.22μF 100V F.C.	2B
<b>∆</b> kR42	46644800	$0.22\Omega X2$ 5W Ce.R.	1B,2B	mC22	46222800	0.22μF 100V F.C.	1B

#### 2-10. F-5377 Indicator Board

#### Component Side

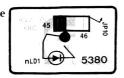


#### **Parts List**

Parts No.	Stock No.	Description
•LED nLD4 nLD5 nLD6 nLD7 nLD8 nLD9	48076100 48076100 48076100 48076100 48272600 48272600	SEL2413E, PHONO SEL2413E, TUNER SEL2413E, CD SEL2413E, AUX SEL2213C, TAPE-1 SEL2213C, TAPE-2/PCM

### 2-11. F-5380 Protector Indicator Board

#### Component Side

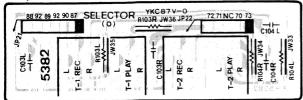


Parts	Lict

Parts No.	Stock No.	Description
•LED		
nLD1	46169300	SEL1210S, PROTECTOR

#### 2-12. F-5382 TAPE Terminal Board

#### **Component Side**

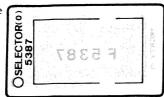


Pa	rts	Lis	t
ra	rts	LIS	ι

Parts No.	Stock No.	Description	
oZ3	46363800	4P Terminal, TAPE-1	
oZ4	46363800	4P Terminal, TAPE-2	

#### 2-13. F-5387 REC SELECTOR Board

#### Component Side

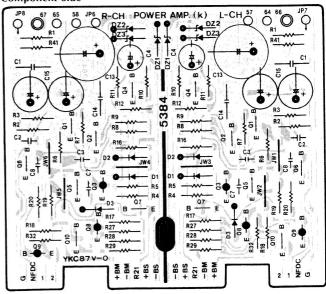


#### Parts List

Tarts List			
Parts No.	Stock No.	Description	
oZ7	48483900	Rotary SW., REC SELECTOR	

#### 2-14. F-5384 Driver Amp. Board (Stock No. 00974901)

#### Component Side



Parts List		
Parts No.	Stock No.	Description
•Transistor kQ1 kQ2 kQ3 kQ4 kQ5 kQ6 kQ7 kQ8 kQ9 kQ10	46581701 46581701 46581601 46581701 46581701 46581701 46581601 48112901 48113001	2SC1845 2SC1845 2SA992 2SC1845 2SC1845 2SC1845 2SC1845 2SA992 2SA949 2SC2229
•Diode kD1	03117600 or 46086000	1S2473T77 1S1588TP-3
kD2	03117600 or 46086000	1S2473T77 1S1588TP-3
kD3	03117600 or 46086000	1\$2473T77 1\$1588TP-3
•Zener Diode kDZ1	46113800 or 46113900	05Z12-X 05Z12-Y
kDZ2	46113800 or 46113900	05Z12-Y 05Z12-X 05Z12-Y
kDZ3	46111700 or 46111800	05Z6.2-X 05Z6.2-Y
kR2 ▲kR27 ▲kR28 ▲kR29 ▲kR32	46452500 46230100 46230100 46229100 46229100	1.8kΩ 1/2W C.R. 820Ω 1/2W N.I.R. 820Ω 1/2W N.I.R. 120Ω 1/2W N.I.R. 120Ω 1/2W N.I.R.
kC1 kC14 kC15	46222800 46222800 46627900	0.22μF 100V F.C. 0.22μF 100V F.C. 47μF 50V E.C.

# 3. ADJUSTMENT

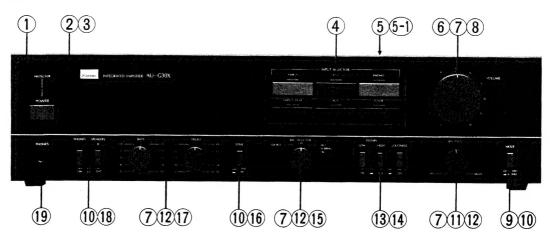
Note: 1) Master Volume .... Minimum

- 2) Room Temperature .... 18°C~28°C (65°F~83°F)
- 3) For this adjustment, run the unit for more than 15 minutes after the power is switched ON.
- 4) Before turning ON power switch, set kVR1 on F-5383 to center position.

STEP	SUBJECT	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	Bias Current Adj. L-CH	Between emitters of power transistors (kQ16L & kQ17L) < Across kR42L >	kVR1, L-ch (F-5383)	DC 20mV ± 2mV	•This bias value is converted from current value to voltage by ohms law.
2.	Bias Current Adj. R-CH	Between emitters of power transistors (kQ16R & kQ17R) < Across kR42R>	kVR1, R-ch (F-5383)	DC 20mV ± 2mV	

# 4. OTHER PARTS

#### 4-1. Front View

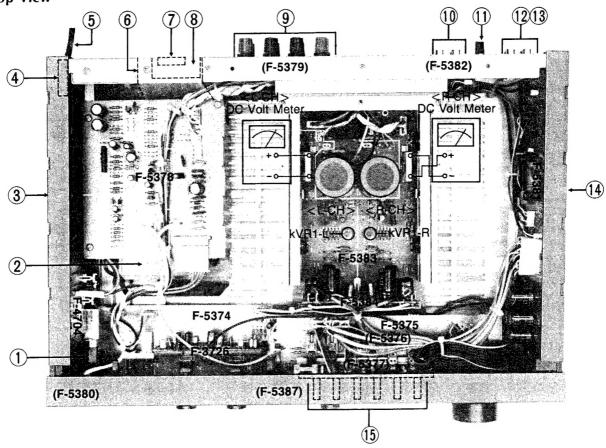


Parts List

Parts No.	Stock No.	Description
1	27160100	Front Panel Ass'y
2	47633700	Knob, POWER
<b>∆</b> 3	48113300	Push SW., POWER
4	48271300	Push SW., INPUT SELECTOR
5	47703600	Bonnet (xx)
	47648300	Bonnet Ass'y (EU,BS)
5-1	47560800	Grille of Bonnet (EU,BS)
6	48429800	150kΩx2 VR., VOLUME
7	47287800	FS Holder
8	47636400	Knob, VOLUME
9	48077000	Push SW., MODE
10	47636300	Push Knob, MODE, PHONES,
		TONE, SPEAKERS
11	48077400	250k $\Omega$ (MN) VR., BALANCE
12	47636600	Knob, BALANCE, REC SELECTOR
		TREBLE, BASS
13	48076900	Push SW., LOW, HIGH,
		LOUDNESS
14	47636300	Knob, LOW, HIGH, LOUDNESS
15	48271510	Flexible Wire (Rotary)
16	48489500	Push SW., TONE
17	48077500	$50$ k $\Omega$ (C) VR., TREBLE, BASS
18	48077200	Push SW., SPEAKERS
19	46579600	Jack, PHONES

PHONES 660mW/8Ω SPEAKERS 45W + 45W/8Ω

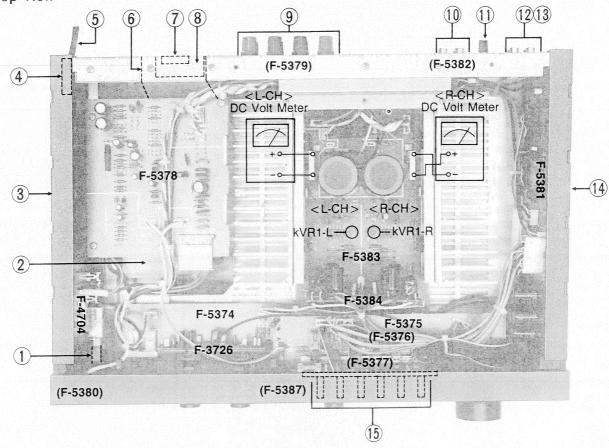
4-2. Top View



<b>Parts</b>	List

Stock No.	Description
47637300	Joint Shaft, POWER SW
15018001	Power Transformer (xx)
15018005	Power Transformer (EU-BS)
47608900	Side Panel Ass'y (L)
47157300	AC Cord Cover
38004700	Power Supply Cord (xx)
38004300	Power Supply Cord (BS)
38004500	Power Supply Cord (EU)
47675400	Insulation Sheet (EU-BS)
48062100	Slide SW., Voltage Selector (xx)
07204700	Slide SW., Voltage Selector
	(EU·BS)
48076600	AC Outlet (xx)
48123100	8P Terminal Board, SPEAKERS
46363800	4P Terminal Board, TAPE-1,
	TAPE-2/PCM
22301510	Ground Terminal
46438100	2P Terminal Board, PHONO
46546800	6P Terminal Board, TUNER, CD,
	AUX
47638600	Side Panel Ass'y (R)
47637400	Joint Shaft, INPUT SELECTOR
	SW.
	47637300 15018001 15018005 47608900 47157300 38004700 38004500 47675400 48062100 07204700 48076600 48123100 46363800 22301510 46438100 46546800 47638600

4-2. Top View

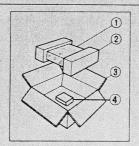


-		
P	arts	LIST

Parts No.	Stock No.	Description
1	47637300	Joint Shaft, POWER SW
<u>^</u> 2	15018001	Power Transformer (xx)
$\overline{\Lambda}$	15018005	Power Transformer (EU·BS)
3	47608900	Side Panel Ass'y (L)
4	47157300	AC Cord Cover
<b>∆</b> 5	38004700	Power Supply Cord (xx)
	38004300	Power Supply Cord (BS)
<u>A</u>	38004500	Power Supply Cord (EU)
<u> </u>	47675400	Insulation Sheet (EU·BS)
<b>A</b> 7	48062100	Slide SW., Voltage Selector (xx)
$\overline{\Delta}$	07204700	Slide SW., Voltage Selector (EU•BS)
<b>∆</b> 8	48076600	AC Outlet (xx)
9	48123100	8P Terminal Board, SPEAKERS
10	46363800	4P Terminal Board, TAPE-1, TAPE-2/PCM
11	22301510	Ground Terminal
12	46438100	2P Terminal Board, PHONO
13	46546800	6P Terminal Board, TUNER, CD, AUX
14	47638600	Side Panel Ass'y (R)
15	47637400	Joint Shaft, INPUT SELECTOR SW.

# 6. PACKING LIST

Parts No.	Stock No.	Description
il inggrad	47858600	Vinyl Cover
2	47675300	Styrofoam Packing
3	27159800	Carton Case
4	27061300	Sub Styrofoam Packing



# 7. ACCESSORY LIST

2.4	Stock No.	Description
New York	46998100 46998200	Operating Instruction (*E·F·S) Operating Instruction (*G·I·Sw)

\*Note:

E·F·S: English·French and Spanish Version G·I·Sw: German·Italian and Swedish Version



SANSUI ELECTRIC CO., LTD.:

SANSUI ELECTRONICS CORPORATION:

SANSUI ELECTRONICS (U.K.) LTD SANSUI ELECTRONICS G.M.B.H 14.1, Izumi 2-chome, Suginami-ku, Tokyo 168 Japan
PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)
1250 Vailey Brook Ave. Lyndhurst, N.J. 07071 U.S.A.
17150 South Margay Ave. Carson. California 90746 U.S.A.
3036 Koapaka Street Honolulu, Hawaii 96819 U.S.A.
Unit 10A, Lyon Industrial Estate. Rockware. Avenue, Greenford, Middx UB6, OAA, England
Pau Ehrich Strasse 8, 6074. Rodermark 2. West Germany